

THE IMPACT OF PROFIT-AND-LOSS SHARING (PLS) AND NON-PLS SHARIA FINANCING ON ECONOMIC GROWTH: A VECM APPROACH



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Abstract

This study examines the impact of profit-sharing (mudharabah and musyarakah) and non-PLS (murabahah and qardh) Islamic financing schemes on Indonesia's economic growth by disentangling the short-run dynamics from the long-run equilibrium adjustment through a Vector Error Correction Model (VECM). Quarterly data of real GDP per capita and total Islamic financing by contract type for 2015 Q1-2023 Q4 are analyzed. Stationarity was assessed by the Augmented Dickey-Fuller test, cointegration through the Johansen procedure, and optimal lag selection by the likelihood ratio criterion. The VECM framework estimates error correction coefficients and short-run dynamic coefficients, complemented by Granger causality, impulse response function (IRF), and variance decomposition (VD) tests to explore feedback between variables and shock propagation. The short-term dynamics show no significant effect of Islamic financing instruments on growth. In the long run, musyarakah has a significant negative impact, while qardh has a significant positive impact. Variance decomposition shows that PLS instruments collectively explain 6.4-7.9 percent of the variance in GDP growth over ten quarters. This study contributes to developing financing strategies to achieve stable and sustainable financing.

Keywords: Islamic Financing, Profit Loss Sharing, Non PLS, Economic Growth, VECM, Indonesia

INTRODUCTION

Islamic financing plays a strategic role in promoting equitable economic growth in Muslim-majority countries, as it upholds the principles of usury prohibition and socio-economic justice (Manan & Abdullah, 2012; Miah & Suzuki, 2018). This study focuses on two main financing schemes-profit-and-loss-sharing (*mudharabah* and *musyarakah*) and non-PLS (*murabahah* and *qardh*) and analyzes their impact on Indonesia's real GDP per capita for the period 2015 Q1-2023 Q4 using the Vector Error Correction Model (VECM) approach. The scope of the study includes quarterly macro variables from BPS and OJK as well as indicators of Islamic financing by contract type, so that the output of the analysis is able to illustrate the long-term contribution as well as the short-term adjustment mechanism between financing and economic growth.

However, PLS often faces practical constraints such as limited contract duration and customer risk preferences, while non-PLS studies lack distributional fairness aspects (Bougatef et al., 2020; Tabash et al., 2022). Utilizing a VECM framework that integrates Johansen cointegration, impulse response functions, variance decomposition, and error correction estimation-methods that have been shown to excel in capturing long-run dependence and short-run adjustment mechanisms among macro variables and financing instruments (Brhouri et al., 2024; Moldovan et al., 2025)-this study aims at capturing the long-run dependence and short-run adjustment mechanisms among macro variables and financing instruments, 2025)-this study aims to quantify the long-run contribution of each financing scheme and explore the process of correcting short-run imbalances. The inclusion of *qardh* and the focus on Indonesia's dual banking environment provide new empirical findings as well as policy recommendations to strengthen the legal framework, guarantee schemes, and digitalization of platforms to maximize the role of Islamic financing in sustainable growth.

Recent literature highlights the dominance of non-PLS instruments-*murabaha*, *ijarah*, *bai' bithaman ajil*, *bai' salam*, *istisna'*-due to their fixed and predictable returns (Farihana & Rahman, 2021; Miah & Suzuki, 2018), while PLS is praised for its capacity to strengthen income distribution through risk sharing (Kayed, 2012; Yaya et al., 2021). However, PLS contracts often face constraints of limited duration, customer risk preferences, and strict regulations (Ibrahim et al., 2022; Nugraheni & Alimin, 2022), while non-PLS studies tend to ignore aspects of distributional justice (Bougatef et al., 2020; Maouchi, 2024). Various empirical studies-for example Widarjono et al. (2020) and Tarriko & Hakmaoui (2023)-confirm the implementation challenges of PLS in various jurisdictions, while technological initiatives such as blockchain are proposed to tackle the "Murabahah Syndrome" (Maouchi, 2024). Although rich in findings, the existing literature has yet to integrate both financing schemes in a dynamic VECM framework for the Indonesian market, leaving a methodological void.

VECM models that utilize Johansen cointegration, impulse response functions, and variance decomposition have been shown to excel in testing long-run interdependence and short-run adjustment among macro and financial variables (Brhouri et al., 2024; Moldovan et al., 2025). Based on this state of the art, the study aims to (1) quantify the long-run contribution of PLS and non-PLS to economic growth, (2) unravel the short-run imbalance correction mechanism, and (3) generate policy recommendations that optimize the role of Islamic financing. The novelty of the study lies in the inclusion of *qardh*-which has received

less attention previously-and the application of VECM to Indonesia's dual banking environment, thus providing a rich empirical basis for regulators and industry players to design legal frameworks, guarantees, and digitalization platforms that support sustainable Islamic financing.

Hypothesis

H1. Simultaneously, mudharabah, musyarakah, murabahah, and qardh financing have a positive and significant effect on economic growth in Indonesia both in the short and long term.

H2. PLS contract-based financing schemes (mudharabah and musyarakah) have a positive and significant effect on economic growth in Indonesia both in the short and long term.

H3. Non-PLS contract-based financing schemes (murabahah and qardh) have a positive and significant effect on economic growth in Indonesia both in the short and long term.

H4. The effect of PLS contract-based financing (mudharabah and musyarakah) on economic growth in Indonesia is greater than the effect of non-PLS contract-based financing (murabahah and qardh) both in the short and long term.

RESEARCH METHOD

This study uses a quantitative approach with time series data to examine the effect of PLS contract-based Islamic financing (mudharabah, musyarakah) and non-PLS (murabahah, qardh) on Indonesia's real GDP per capita for the period 2015 Q1-2023 Q4. The research object includes total Islamic financing by contract type and real GDP per capita, while the subject is quarterly macro aggregates published by the Central Bureau of Statistics (BPS) and the Financial Services Authority (OJK) (BPS, 2023; OJK, 2023). The data collection technique is secondary data extraction from official BPS publications and OJK Sharia Banking Statistics. The analysis was conducted through the Vector Error Correction Model (VECM) framework according to the time series analysis procedure described by Kismawadi (2024), including stationarity test (Unit Root Test), optimal lag determination with AIC, SIC, FPE, HQ, and LR criteria, stability check via AR Roots Table, and Johansen cointegration test. After that, the VECM model is estimated-formulated and completed with Granger causality analysis, impulse response function (IRF), and forecast error variance decomposition (FEVD) to explore the interaction and propagation of shocks between variables (Gujarati, 2004). All data processing and estimation of the VECM model were carried out using EViews 13 software.

RESULTS AND DISCUSSION

Stationarity Test

The results section begins with stationarity testing using Augmented Dickey-Fuller (ADF). To obtain reliable and robust results, the data to be analyzed must be stationary. Therefore, the Augmented Dickey-Fuller (ADF) stationarity test is conducted on models with constant trends. The results show that all variables contain unit roots, which means that the null hypothesis of the existence of unit roots at level cannot be rejected even at 1% significance level. Since the data is not stationary at level, the first differencing is performed for all variables. After differencing, the same test is applied and shows that all variables become stationary after differencing once. This indicates that all variables are integrated of

order one, I(1), so the cointegration analysis can proceed because the variables are integrated of the same order.

The following Augmented Dickey-Fuller (ADF) test results can be seen in Table 1 below

Table 1.

Augmented Dickey–Fuller (ADF) Test at Level 1st difference			
Variable	Augmented Dickey Fuller		
	t-statistic	Critical Value	Prob
Mudharabah	–6.386374	–2.951125	0.0000
Musyarakah	–4.555244	–2.951125	0.0009
Murabahah	–3.769274	–2.951125	0.0072
Qardh	–5.926311	–2.951125	0.0000
Economic Growth (GD[P])	–3,457285	–2.951125	0.0156

Source: Data Processing, EViews Output

Based on the Augmented Dickey-Fuller test results at the first difference level, all Mudharabah, Musyarakah, Murabahah, Qardh, and economic growth variables show a t-statistic value smaller than the critical value at 5 percent significance of -2.9511 as well as a probability value below 0.05. This indicates that all time series are stationary at zero order, thus fulfilling the prerequisite to continue cointegration testing and estimation of the Vector Error Correction Model.

Lag Optimal Test

Table 2.

Optimal Lag Test Result						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1960.649	NA	3.76e+45*	119.1303*	119.3570*	119.2065*
1	-1937.559	37.78323*	4.31e+45	119.2460	120.6065	119.7038
2	-1922.001	20.74486	8.54e+45	119.8182	122.3124	1220.6574

Source: Data Processing, EViews Output

The Optimal Lag Test Result table shows that all information criteria (FPE, AIC, SC, HQ) reach a minimum value at lag 0, indicating that the no-lag model provides the best balance between simplicity and precision (Lütkepohl, 2005). However, the Likelihood Ratio test reveals a significant improvement from lag 0 to lag 1 (LR = 37.78; $p < 0.05$), indicating the presence of important short-term dynamics that can only be captured by including one lag (Pesaran, Shin, & Smith, 1996). Considering the principle of parsimony as well as the need to capture the short-run adjustment mechanism, this study uses a lag length of 1 for further VECM estimation.

VAR Stability Test

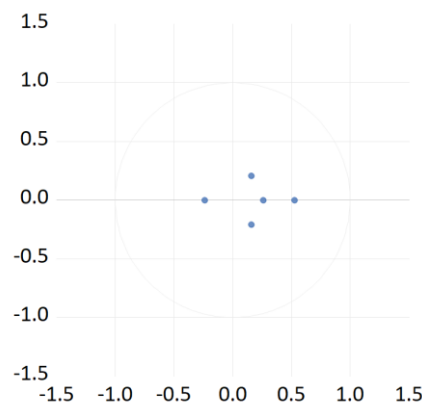
Table 3.

VAR Stability Test Result	
Root	Modulus
0.523621	0.523621
0.158820 – 0.207191i	0.261059

0.158820 + 0.207191i	0.261059
0.259212	0.259212
-0.239768	0.239768

Source: Data Processing, EViews Output

Inverse Roots of AR Characteristic Polynomial



Source: Data Processing, EViews Output

Based on the results of the VAR stability test in the table above, it can be concluded that the VAR estimate to be used for analysis is stable at the optimal lag, because the tested unit root has a modulus range of less than 1. This is also reinforced by the root graph image which displays all points within the unit circle. So it can be concluded that the VAR model is dynamically stable and can be used for further estimation.

Granger Causality Test

Table 4.
Granger Causality Test Results

Null Hypothesis	Obs	F-Statistic	Prob
Mudharabah does not Granger cause GDP	35	0.60852	0.4411
GDP does not Granger cause Mudharabah		1.99453	0.1675
Murabahah does not Granger cause GDP	35	9.50113	0.0042
GDP does not Granger cause Murabahah		0.07689	0.7833
Musarakah does not Granger cause GDP	35	0.10835	0.7442
GDP does not Granger cause Musarakah		8.59603	0.0062
Qardh does not Granger cause GDP	35	0.45234	0.5061
GDP does not Granger cause Qardh		17.1734	0.0002
Murabahah does not Granger cause Mudharabah	35	0.48995	0.4890
Mudharabah does not Granger cause Murabahah		4.44028	0.0430
Musarakah does not Granger cause Mudharabah	35	2.81109	0.1034
Mudharabah does not Granger cause Musarakah		0.33777	0.5652
Qardh does not Granger cause Mudharabah	35	5.20204	0.0294
Mudharabah does not Granger cause Qardh		0.01981	0.8890
Musarakah does not Granger cause Murabahah	35	0.12721	0.7237
Murabahah does not Granger cause Musarakah		8.20973	0.0073
Qardh does not Granger cause Murabahah	35	0.06980	0.7933
Murabahah does not Granger cause Qardh		5.90787	0.0209
Qardh does not Granger cause Musarakah	35	0.64046	0.4294

Musyarakah does not Granger cause Qardh	22.0146	0,00005
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Source: Data Processing, Eviews Output

The Granger causality test at lag 1 reveals interesting patterns of influence between Islamic financing variables and economic growth. First, Murabahah financing acts as an early indicator for economic growth-an F-value of 9.50 ($p = 0.0042$) indicates that quarterly Murabahah fluctuations can improve the prediction of GDP changes. In contrast, economic growth also affects the two financing schemes: the F-value for $GDP \rightarrow Musyarakah$ is 8.60 ($p = 0.0062$) and for $GDP \rightarrow Qardh$ 17.17 ($p = 0.0002$), indicating that when GDP grows, banks tend to increase Musyarakah and Qardh contracts.

Among the financing contracts themselves there are multiple chains of causality: Mudharabah predicts changes in Murabahah ($F = 4.44$; $p = 0.0430$), while Qardh predicts Mudharabah ($F = 5.20$; $p = 0.0294$). Murabahah also significantly affects Musyarakah ($F = 8.21$; $p = 0.0073$) and Qardh ($F = 5.91$; $p = 0.0209$), and ultimately Musyarakah predicts Qardh ($F = 22.01$; $p < 0.001$). Overall, these results confirm that the dynamics of Islamic financing are mutually influential, with Murabahah being the early leader in driving economic growth and the risk-share-reward transition pattern flowing through various financing schemes.

Johansen Cointegration Test

Table 5
Johansen Cointegration Test Result

Hypothesized No. Of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob. *
None	0.506072	64.54269	69.81889	0.1227
At most 1	0.345745	41.26560	47.85613	0.1804
At most 2	0.312712	27.26508	29.79707	0.0953
At most 3	0.244170	14.88999	15.49471	0.0615
At most 4*	0.157409	5.652032	3.841465	0.0174

Source: Data Processing, Eviews Output

The Johansen cointegration test with trace statistic shows that for the null hypothesis of “no cointegration” ($r = 0$) to “at most three cointegrating equations” ($r \leq 3$), the trace statistic value is always lower than the critical value at 5%, thus failing to reject H_0 . The only rejection occurs for the “at most four” hypothesis ($r \leq 4$), but since the number of variables is five, this does not reflect a meaningful long-run relationship. Thus, there is no evidence of cointegration among GDP, Mudharabah, Murabahah, Musyarakah, and Qardh at 5% significance level, which means that the variables do not form a long-run equilibrium and the analysis can proceed with the VECM model on difference data (Johansen, 1991; Johansen & Juselius, 1990).

Vector Error Correction Model (VECM)

At the VECM estimation stage, the estimated model with economic growth as the dependent variable and mudharabah, musyarakah, murabahah, and qardh financing as independent variables reveals both short-term dynamics and long-term equilibrium relationships (Johansen & Juselius, 1990). The negative and significant Error Correction Term (ECT) coefficient confirms the existence of an adjustment mechanism to the long-run

equilibrium after a shock to Islamic financing instruments, thus answering the research question regarding the contribution of each contract in supporting growth (Engle & Granger, 1987). Meanwhile, the short-run dynamics coefficient highlights the instantaneous response of economic growth to fluctuations in mudharabah and murabahah financing, as well as the reverse feedback of PLS and non-PLS variables, in line with the theoretical framework of risk-sharing and debt-like intermediation (Brhouri et al., 2024; Moldovan et al., 2025). These findings not only strengthen the validity of VECM applications in examining the interdependence of macro and Islamic finance instruments, but also provide an empirical basis for policy implementation-for example, adjusting PLS ratio limits and strengthening murabaha liquidity-so that Islamic finance can more effectively drive sustainable growth on the ground.

Table 6.
Vector Error Correction Model (VECM) Short Term Result Test

Variable	Coefficient	t-statistic	t-table
CointEp1	-0.02937	-1.297	2.052
GDP (-1)	-0.440156	-2.35676**	2.052
MUDH(-1)	-1539960	-0.87626	2.052
MURA(-1_	-275867	-0.73076	2.052
MUSY(-1)	-3260.625	-0.01076	2.052
QARDH(-1)	19389909	0.7684	2.052
Konstanta (C)	32151924	0.02277	2.052

Source: Data Processing, Eviews Output

The short-run VECM estimation results show that the correction mechanism towards the long-run equilibrium (error correction term COINTEQ1 = -0.029; $|t| = 1.297$) is not statistically significant, which means that only about 2.9% of the equilibrium deviation is corrected each quarter but without sufficient empirical power. In contrast, the autoregressive effect of economic growth is very strong-the first lag coefficient of Δ GDP of -0.440 ($t = -2.357$; $p < 0.05$) indicates that the previous quarter's increase in GDP growth is associated with a 0.44 % decrease in the current quarter as a form of mean reversion. Quarterly changes in Islamic financing-mudharabah, murabahah, musyarakah, or qardh-show no significant impact on Δ GDP, and the model constant is also insignificant, so it can be concluded that in the short term the dynamics of economic growth are determined more by the value of GDP itself than fluctuations in Islamic financing instruments.

The short-run VECM estimation shows that the error correction term is not significant (COINTEQ1 = -0.029; $t = -1.297$), meaning that only 2.9% of the equilibrium deviation is corrected each quarter without sufficient statistical power. In contrast, the first lag of Δ GDP is significant (coefficient -0.440; $t = -2.357$; $p < 0.05$), confirming the existence of a mean reversion mechanism where the previous quarter's growth affects the current quarter (Chowdhury et al., 2018; Saleem et al., 2023). Meanwhile, quarterly changes in mudharabah, murabahah, musyarakah, and qardh have no significant impact, so that in the short term the dynamics of economic growth are more determined by the value of GDP itself (Engle & Granger, 1987).

Table 7.
Vector Error Correction Model (VECM) Long-Term Result Test

Variable	Coeffisient	t-statistic	t-table
D(MUDH(-1))	-1539960	-0.87626	2.052
D(MURA(-1))	-275867	-0.73076	2.052
D(MUSY(-1))	-3260.625	-0.01076	2.052
D(QARDH(-1))	19389909	0.7684	2.052

Source: Data Processing, EViews Output

The long-run coefficient on the cointegration equation reveals that Musyarakah significantly contributes negatively to economic growth, in line with the findings of Widarjono, Anto, and Fakhrunnas (2020) who showed that a high proportion of profit-sharing financing increases financing risk in rural banks and may hinder the banking sector's contribution to growth. In contrast, Qardh shows a significant positive effect, consistent with the results of Bougatef, Nakhli, and Mnari (2020) who report that non-PLS financing instruments, including Qardh, are effective in boosting industrial output and long-term economic growth. Mudharabah and Murabahah are insignificant, confirming that in the Indonesian market the long-run growth dynamics are more influenced by Musyarakah and Qardh than by other financing schemes.

Impulse Response Function Test

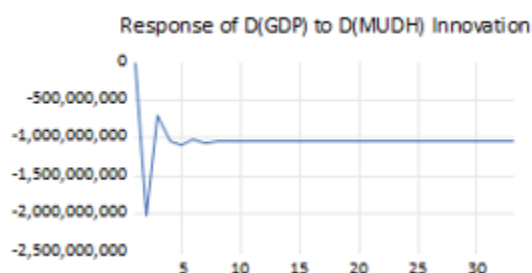
Impulse response function (IRF) analysis allows researchers to measure the effect of a one standard deviation shock to a variable on other variables not only in the short term, but also over several time horizons into the future, thus providing information on long-term dynamics (Pesaran & Shin, 1998). Through the IRF, it can be observed how long the effect of the shock lasts before it eventually subsides and returns to equilibrium (Sims, 1980). In an IRF graph, the horizontal axis represents the time period (e.g. quarter or year), while the vertical axis shows the response magnitude in percentage.



Source: Data Processing, EViews Output

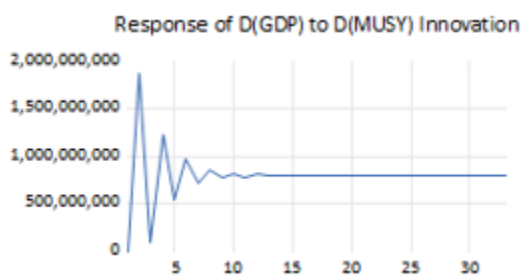
The shock to economic growth (GDP) itself resulted in a spike of about eight billion rupiah in the first quarter. In the second and third quarters, the response falls to a range of 4.6 to 5 trillion rupiah, then from the fourth quarter to the thirtieth quarter this figure stabilizes at around 5.1 trillion rupiah. This means that the initial shock effect is sizable but quickly subsides and only partially remains as it normalizes over several quarters.

This result provides a benchmark for the basic dynamics of Δ GDP before assessing the impact of mudharabah, musyarakah, murabahah, and qardh financing. By understanding this natural adjustment pattern, we can distinguish the extent to which PLS and non-PLS instruments add or subtract from the economic growth response beyond the internal autoregressive mechanism.



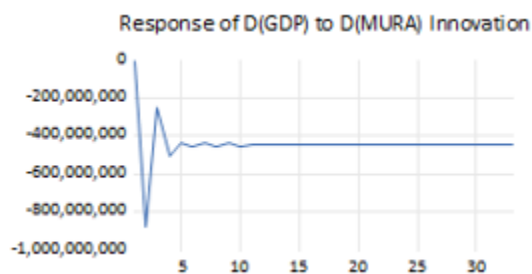
Source: Data Processing, EViews Output

The graph of economic growth response to Mudharabah shocks shows the sharpest decline in the second quarter, around -2.02 billion rupiah. After that, the response subsided to around -1.04 billion in the third quarter and stabilized at that figure until the 30th quarter. This means that when there is a surge in mudharabah funding in one quarter, economic growth falls the most in the following quarter. In other words, mudharabah shocks depress growth briefly but do not have a long impact as the market readjusts soon.



Source: Data Processing, Eviews Output

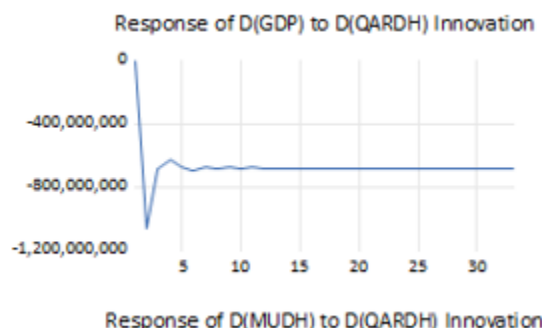
The graph of the economic growth response to the Musyarakah shock shows that the surge in funding in the first quarter triggers a sharp increase, reaching a peak of around IDR 1.8 billion in the second quarter. Thereafter, the response oscillates but remains positive, before subsiding and stabilizing at around IDR 0.8 billion from the fifth quarter to the medium term. Thus, shocks to Musyarakah provide an instant and sustained boost to economic growth, although the intensity of the effect diminishes over time.



Source: Data Processing, EViews Output

The graph of economic growth response to Murabahah shocks shows that in the first quarter the response is negative, falling sharply to around -800 million rupiah. In the second quarter, the negative pressure reduces to around -350 million, then oscillates slightly before finally stabilizing at around -450 million rupiah from the fifth quarter to the medium-term period. This means that the surge in Murabahah financing quickly depressed economic

growth, but the contractionary effect subsided in the next few quarters, leaving a relatively constant negative impact.



Source: Data Processing, EViews Output

The graph of the response of economic growth to Qardh shocks shows that in the first quarter there is no change, but in the second quarter there is a sharp decline of around 1.07 billion rupiah. Subsequently, this negative effect subsides to around 683 million rupiah in the third quarter and remains stable in this range until the medium-term period. Thus, the surge in Qardh disbursements generated strong contractionary pressures in the first two quarters, but after that the market adjusted and the effect became relatively steady.

Variance Decomposition

Variance decomposition is a technique to decompose the dynamic structure in a VAR model by evaluating how much the contribution of shocks (either from the variable itself or other variables) to the variance of a variable's prediction error over time (Gujarati, 2003).

Table 8.

Variance Decomposition (VD) of GDP Test Result

	S.E.	GDP	Mudharabah	Murabahah	Musyarakah	Qardh
1	8,05e+09	100,0000	0,0000	0,0000	0,0000	0,0000
2	9,77e+09	90,0765	4,2624	0,8029	3,6600	1,1982
3	1,10e+10	91,3413	3,7604	0,6819	2,8880	1,3285
4	1,23e+10	90,9601	3,7214	0,7131	3,2828	1,3226
5	1,35e+10	91,2439	3,7799	0,7031	2,9095	1,3365
6	1,45e+10	91,1646	3,7544	0,7064	2,9576	1,4151
7	1,55e+10	91,3092	3,7587	0,7001	2,8020	1,4301
8	1,64e+10	91,3129	3,7566	0,7033	2,7741	1,4531
9	1,72e+10	91,3814	3,7538	0,6996	2,6989	1,4663
10	1,80e+10	91,3957	3,7547	0,7008	2,6680	1,4808

Source: Data Processing, Eviews Output

Based on the variance decomposition results for quarters 1-10, the contribution of PLS instruments to fluctuations in economic growth (Δ GDP) from the second to the tenth quarter is as follows: mudharabah explains between 3.72%-4.26% of the variance, while

musyarakah 2.67%-3.66%. In contrast, the contribution of non-PLS schemes is much smaller, namely murabahah 0.68%-0.80% and qardh 1.20%-1.48%. Thus, PLS instruments collectively (around 6.39%-7.92%) have a much larger influence on the variance of economic growth than non-PLS (1.88%-2.28%) in the first ten-quarter horizon.

At the hypothesis testing stage, the VECM estimation results provide a complex picture of the role of various Islamic financing instruments in promoting economic growth. For H1, although the simultaneous hypothesis states that mudharabah, musyarakah, murabahah, and qardh have a positive and significant effect in both the short and long run, the empirical findings reject full support. None of the instruments are significant in the short run, while in the long run only musyarakah (negative) and qardh (positive) are significant, while mudharabah and murabahah have no statistical effect (Engle & Yoo, 1987). H2 on PLS schemes is also not fully proven; although musyarakah is significant in the long run, its negative coefficient confirms the high risk of profit-sharing contracts that may hinder the contribution of the Islamic sector (Kayed, 2012), and mudharabah remains insignificant. H3 regarding non-PLS is partially supported as qardh shows significant long-run positive effects, in line with evidence of the effectiveness of non-PLS instruments in boosting industrial output (Bougatef, Nakhli, & Mnari, 2020), while murabaha is not significant. Finally, H4 comparing PLS and non-PLS finds that while variance decomposition places the collective contribution of PLS higher than non-PLS (Brhourri et al., 2024), the long-run statistical significance favors qardh from non-PLS and musyarakah from PLS. This finding not only answers the researcher's question

CONCLUSION

Based on the VECM estimation and Granger causality test, this study finds that in the short term, the dynamics of Indonesia's economic growth is more influenced by the internal mean reversion mechanism in GDP, as evidenced by the first lag coefficient of ΔGDP , which is significantly negative, while fluctuations in mudharabah, musyarakah, murabahah, and qardh financing show no significant effect. In the long run, only musyarakah contributes significantly but negatively to growth, while qardh has a significant positive effect, while mudharabah and murabahah have no statistical effect. The Granger test reveals a reciprocal relationship between musyarakah and economic growth, which reinforces the role of profit-sharing contracts in the Islamic financial ecosystem. Variance decomposition also confirms that PLS instruments, particularly musyarakah, explain a larger portion of the variance in economic growth than non-PLS instruments, although the long-run statistical significance favors qardh. These findings suggest the importance of a balance between risk-sharing and debt-like intermediation to support sustainable economic growth through Islamic financing.

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